

THE INVENTION CLAIMED IS:

1. A method of assembling a container comprising an inner tube contained within an outer tube, the method comprising:

providing an outer tube having a closed bottom, an open top and a side wall extending therebetween, said side wall defining an inner surface and an outer surface;

providing a spacing element adjacent the open top of the outer tube, said spacing element including a central opening extending therethrough and at least one extending member extending within the open top of the outer tube; and

inserting an inner tube within the outer tube through the central opening of the spacing element, said inner tube having a closed bottom, an open top and a side wall extending therebetween, said side wall defining an inner surface and an outer surface, at least a portion of said inner tube having an external diameter which is smaller than an internal diameter of the outer tube to form an annular gap therebetween;

wherein at least as portion of the spacing element extends between the inner surface of the outer tube and the outer surface of the inner tube during assembly to allow for venting of air from the annular gap to atmospheric pressure during insertion of the inner tube within the outer tube.

2. The method of claim 1, further comprising the step of removing the spacing element after venting of air from the annular gap.

3. The method of claim 2, further comprising the step of providing a closure for the container.

4. The method of claim 3, further comprising the step of evacuating the container.

5. The method of claim 1, wherein the side wall of the inner tube is shorter than the side wall of the outer tube.

6. The method of claim 1, wherein said spacing element includes a rim associated with the open top of the outer tube.

7. The method of claim 1, wherein the side wall of the inner tube is flared outwardly adjacent the open top of the inner tube for supporting engagement with the side wall of the outer tube.

8. The method of claim 7, wherein the flared side wall adjacent the open top of the inner tube deforms about said spacing element to allow for venting of air from the annular gap to atmospheric pressure.

9. The method of claim 7, wherein at least a portion of the outer surface of the inner tube is in contact with at least a portion of the inner surface of the outer tube and the at least one spacing member is in frictional engagement with at least a portion of the flared side wall of the inner tube adjacent the open top of the inner tube during venting of air from the annular gap.

10. The method of claim 9, wherein the outer surface of the closed bottom of the inner tube is in contact with the inner surface of the closed bottom of the outer tube during venting of air from the annular gap.

11. The method of claim 1, wherein the spacing element includes at least two extending members equally spaced on opposing sides of said spacing element.

12. The method of claim 1, wherein the at least one extending member of the spacing element is air permeable.

13. The method of claim 1, wherein the at least one extending member of the spacer element comprises a material that is at least as hard as a material forming the outer tube.

14. A container assembly comprising:

an outer tube having a closed bottom, an open top and a side wall extending therebetween, said side wall defining an inner surface and an outer surface;

an inner tube disposed within the outer tube and having a closed bottom, an open top and a side wall extending therebetween, the side wall of the inner tube being shorter than the side wall of the outer tube and flared outwardly adjacent the open top of the inner tube for sealing and supporting engagement with the side wall of the outer tube; and

an annular gap extending between the inner surface of the outer tube and the outer surface of the inner tube in equilibrium with atmospheric pressure at the time of assembly,

wherein the annular gap is vented to atmospheric pressure during assembly of the container by imparting an interference engagement between the inner tube and the outer tube adjacent the open top of the outer tube.

15. The container assembly of claim 14, wherein the outer container is formed from a polymeric material.

16. The container assembly of claim 15, wherein the outer container comprises polyethylene terephthalate.

17. The container assembly of claim 14, wherein the inner tube is formed from a polymeric material.

18. The container assembly of claim 17, wherein the inner tube comprises polypropylene.

19. The container assembly of claim 14, wherein the interference engagement between the inner tube and the outer tube is established through a spacing element providing at the open end of the outer tube during assembly.

20. The container assembly of claim 19, wherein the spacing element includes at least one extending member extending within the open top of the outer tube during assembly.

21. The container assembly of claim 20, wherein the extending member of the spacing element comprises a material which is at least as hard as a material forming the outer tube.

22. A spacer element for venting of air between an inner tubular member inserted within an outer tubular member, the spacer element comprising a rim portion forming a central opening therethrough and adapted for placement at an open top of the outer tubular member, and at least one depending portion adapted to extend between the inner tubular member and the outer tubular member during insertion of the inner tubular member through the central opening.

23. The spacer element of claim 22, wherein the at least one extending element is adapted for flexing outwardly upon force.

24. The spacer element of claim 22, comprising at least two depending portions equally spaced about said rim.

25. The spacer element of claim 22, comprising a unitary ring-like structure having a bottom surface for resting on the open top of the outer tubular element and including a plurality of depending portions equally spaced about said rim.

26. A method of assembling a container comprising an inner tube contained within an outer tube, the method comprising:

providing an outer tube having a closed bottom, an open top and a side wall extending therebetween, said side wall defining an inner surface and an outer surface, said inner surface having a recess adjacent the open top thereof;

providing an inner tube within the outer tube, said inner tube having a closed bottom, an open top and a side wall having an inner surface and an outer surface extending therebetween, the side wall of the inner tube being shorter than the side wall of the outer tube and including an outwardly flared portion adjacent the open top of the inner tube;

inserting the inner tube within the open top of the outer tube to a position in which the outwardly flared portion of the inner tube extends below a top edge of the recess of the inner surface of the outer tube; and

contacting the outwardly flared portion of the inner tube within the recess, thereby sealingly supporting the inner tube within the outer tube.

27. The method of claim 26, wherein inserting the inner tube within the open top of the outer tube to a position in which the outwardly flared portion of the inner tube extends below a top edge of the recess of the inner surface of the outer tube causes air trapped between the inner tube and the outer tube to pass through the recess and vent to atmospheric pressure.

28. The method of claim 26, wherein the contacting step further comprises contacting the outwardly flared portion of the inner tube with the top edge of the recess.

29. The method of claim 26, wherein the recess of the outer tube extends circumferentially around the inner surface of the outer tube.

30. The method of claim 26, wherein the recess of the outer tube extends longitudinally to the open end of the outer tube.

31. The method of claim 26, wherein at least a portion of the inner tube has an external diameter which is smaller than an internal diameter of at least a portion of the outer tube to form an annular gap therebetween.

32. The method of claim 31, wherein the inserting step further comprises deforming the outwardly flared portion of the inner tube below the top edge of the recess of the inner surface of the outer tube to cause air trapped between the inner tube and the outer tube to pass through the recess and vent to atmospheric pressure.

33. The method of claim 32, wherein the inner surface of the outer tube further comprises a protrusion adjacent the recess for causing the outwardly flared portion to deform when the outwardly flared portion of the inner tube extends below the top edge of the recess of the inner surface of the outer tube.

34. The method of claim 32, wherein inserting the outwardly flared portion of the inner tube below the top edge of the recess of the inner surface of the outer tube causes the inner tube to be biased toward the open end of the outer tube.

35. The method of claim 34, wherein the outer surface of the closed bottom of the inner tube is in contact with the inner surface of the closed bottom of the outer tube when the outwardly flared portion of the inner tube extends below the top edge of the recess of the inner surface of the outer tube, thereby causing the inner tube to be biased toward the open end of the outer tube.

36. The method of claim 26, wherein the outer tube further comprises a longitudinal groove extending between the recess on the inner surface of the outer tube to the open end of the outer tube.

37. A container assembly comprising:

an outer tube having a closed bottom, an open top and a side wall extending therebetween, said side wall defining an inner surface and an outer surface, said inner surface having a recess adjacent the open top thereof;

an inner tube disposed within the outer tube, said inner tube having a closed bottom, an open top and a side wall having an inner surface and an outer surface extending therebetween, the side wall of the inner tube being shorter than the side wall of the outer tube and including an outwardly flared portion adjacent the open top of the inner tube and extending within the recess of the outer tube, a portion of the outwardly flared portion of the inner tube being biased within the recess of the outer tube to sealingly support the inner tube within the outer tube.

38. The container assembly of claim 37, wherein a top portion of the outwardly flared portion of the inner tube is biased against a top edge of the recess of the outer tube to sealingly support the inner tube within the outer tube.

39. The container assembly of claim 37, wherein at least a portion of said inner tube has an external diameter which is smaller than an internal diameter of the outer tube to form an annular gap therebetween, the annular gap extends in equilibrium with atmospheric pressure at the time of assembly.

40. The container assembly of claim 39, wherein the annular gap is vented to atmospheric pressure during assembly through an interference engagement between the inner tube and the outer tube at the recessed area of the outer tube.

41. The method of claim 37, wherein the recess of the outer tube extends circumferentially around the inner surface of the outer tube.

42. The method of claim 37, wherein the recess of the outer tube extends longitudinally to the open end of the outer tube.

43. The method of claim 37, further comprising a longitudinal groove extending between the recess on the inner surface of the outer tube to the open end of the outer tube.

44. The container assembly of claim 37, wherein the outer surface of the closed bottom of the inner tube is in contact with the inner surface of the closed bottom of the outer tube.

45. The container assembly of claim 37, wherein the outer container is formed from a polymeric material.

46. The container assembly of claim 37, wherein the outer container comprises polyethylene terephthalate.

47. The container assembly of claim 37, wherein the inner container is formed from a polymeric material.

48. The container assembly of claim 37, wherein the inner container comprises polypropylene.